

WHAT IS CLAIMED IS:

1. A method for processing information, comprising:
receiving a segmented judgment matrix, the segmented judgment matrix being a
5 numerical matrix pairing each of a set of terms to each of a set of classifications, each term
being a word or phrase, the segmented judgment matrix having a plurality of information
submatrices, each element of each information submatrix representing a rating of a relevance
of the term of the element to the classification of the element, each information submatrix
being a numerical matrix representing the relevance of each of a subset of the set of terms to
10 each of a subset of the set classifications; and
using the segmented judgment matrix to calculate an information spectrum.
2. The method of claim 1, wherein at least some of the elements of the information
submatrices represent ratings of relevance made by a human being.
3. The method of claim 1 wherein the segmented judgment matrix has rows and columns
15 and each column of the segmented judgment matrix represents a classification and each row
of the segmented judgment matrix represents a term.
4. The method of claim 1, further comprising:
receiving a search request;
using the segmented judgment matrix to calculate an information spectrum of the search
20 request;
using the segmented judgment matrix to calculate an information spectrum for each of a
plurality of documents; and
identifying at least some documents of the plurality of documents as relevant to the
search request based upon a comparison of the calculated information spectrums.
- 25 5. The method of claim 4 wherein:
each information submatrix has a plurality of classifications and a plurality of terms
relevant to each classification; and
using the segmented judgment matrix to calculate an information spectrum for each of a

plurality of documents comprises calculating an information spectrum for each of the plurality of documents based upon at least some of the plurality of terms;

the method further comprising:

5 selecting the plurality of terms based upon a relevance of each term of the plurality of terms to at least some of the classifications of the information submatrices.

6. The method of claim 4 wherein the step of calculating an information spectrum for each document and for the search request further comprises determining a log average among the ratings of relevance of the terms for each classification.

7. The method of claim 4 wherein the step of identifying at least some documents further
10 comprises determining a distance between the information spectrum of the at least some documents and the information spectrum of the search request.

8. The method of claim 4 further comprising:

selecting a document of the identified documents as definitely relevant to the search request including calculating an information spectrum of the selected document; and

15 using the calculated information spectrum of the selected document as a new search request.

9. The method of claim 4 further comprising:

zooming in on a portion of a document information spectrum; and

20 determining that a document and request have a wide spectrum with significant content in a field F of a term and measuring the request and document using a subengine for field F.

10. A computer program product comprising instructions operable to cause data processing apparatus to:

receive a segmented judgment matrix, the segmented judgment matrix being a numerical matrix pairing each of a set of terms to each of a set of classifications, each term being a
25 word or phrase, the segmented judgment matrix having a plurality of information submatrices, each element of each information submatrix representing a rating of a relevance of the term of the element to the classification of the element, each information submatrix

being a numerical matrix representing the relevance of each of a subset of the set of terms to each of a subset of the set classifications; and

use the segmented judgment matrix to calculate an information spectrum.

11. The product of claim 10 wherein at least some of the elements of the information
5 submatrices represent ratings of relevance made by a human being.

12. The product of claim 10 wherein the segmented judgment matrix has rows and columns and each column of the segmented judgment matrix represents a classification and each row of the segmented judgment matrix represents a term.

13. The product of claim 10 further comprising instructions to:
10 receive a search request;
use the segmented judgment matrix to calculate an information spectrum of the search request;
use the segmented judgment matrix to calculate an information spectrum for each of a plurality of documents; and
15 identify at least some documents of the plurality of documents as relevant to the search request based upon a comparison of the calculated information spectrums.

14. The product of claim 13 wherein:
each information submatrix has a plurality of classifications and a plurality of terms relevant to each classification; and
20 the instructions to use the segmented judgment matrix to calculate an information spectrum for each of a plurality of documents comprise instructions to calculate an information spectrum for each of the plurality of documents based upon at least some of the plurality of terms;
the product further comprising instructions to:
25 select the plurality of terms based upon a relevance of each term of the plurality of terms to at least some of the classifications of the information submatrices.

15. The product of claim 13 wherein the instructions to calculate an information spectrum for each document and for the search request further comprise instructions to determine a log average among the ratings of relevance of the terms for each classification.

16. The product of claim 13 wherein the instructions to identify at least some documents
5 further comprise instructions to determine a distance between the information spectrum of the at least some documents and the information spectrum of the search request.

17. The product of claim 13 further comprising instructions to:

select a document of the identified documents as definitely relevant to the search request including instructions to calculate an information spectrum of the selected document; and

10 use the calculated information spectrum of the selected document as a new search request.

18. The method of claim 13 further comprising instructions to:

zoom in on a portion of a document information spectrum; and

determine that a document and request have a wide spectrum with significant content in a
15 field F of a term and measure the request and document using a subengine for field F.

19. A computer program product for processing text information, the product comprising instructions operable to cause data processing apparatus to perform the operations of:

receiving a judgment matrix that is segmented into a plurality of information submatrices where each submatrix has a plurality of classifications and a plurality of terms relevant to
20 each classification;

evaluating a relevance of each term of the plurality of terms with respect to each classification of each information submatrix of the information submatrices;

calculating an information spectrum for each of a plurality of documents based upon at least some of the plurality of terms;

25 receiving a search request;

calculating an information spectrum of the search request based upon at least some of the plurality of terms; and

identifying at least some documents of the plurality of documents as relevant to the request based upon a comparison of the calculated information spectrums.